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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,641	03/17/2004	Bing-Jei Liao	HMOP0008USA	2640

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NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION
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MERRIFIELD, VA 22116

EXAMINER	
NGUYEN, THANH NHAN P	
ART UNIT	PAPER NUMBER
2871	

NOTIFICATION DATE	DELIVERY MODE
07/03/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/708,641	LIAO, BING-JEI	
	Examiner	Art Unit	
	(Nancy) Thanh-Nhan P. Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,15-19,22-28 and 31-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,15-19,22-28 and 31-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/7/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 15, 24, 32 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al (US 2003/0103185).

Kim et al discloses (figs. 6 and 7A) a liquid crystal display panel comprising:

Claim 1:

- a first substrate (100)
- a second substrate (200) having an active region
- a sealant (300) positioned on the second substrate and surrounding the active region for adhering the second substrate to the first substrate
- a spacer wall (260) positioned on the second substrate and between the sealant and the active region, the spacer wall having at least one liquid crystal injected opening and at least one spacer block (270) positioned in the liquid crystal injected opening
- a liquid crystal layer positioned between the first substrate, the second substrate, and the sealant

- wherein the spacer wall supports the first substrate and prevents the liquid crystal layer from being contaminated by the sealant, and the spacer block prevents the sealant from contaminating the liquid crystal layer

Claim 24:

- wherein the spacer wall separates the liquid crystal layer from the sealant

Claim 36:

- wherein the spacer war further comprises a second spacer block (other '270') positioned in parallel with the spacer block

Claim 15 is met the discussion regarding claim 1 rejection above.

Claim 32 is met the discussion regarding claim 1 rejection above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 4-6, 8-10, 16, 18, 19, 25, 27, 28 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Admission, and further in view of Minako (JP 2000-258784).

Regarding claims 2, 4, 5 and 25, Kim et al lacks disclosure of a thin film layer, which is a first alignment film, patterned corresponding to the peripheral region and positioned under the spacer wall, wherein both the sealant and the spacer wall are located on the thin film layer; and a second alignment layer positioned on the first

substrate and opposite to the first alignment and patterned corresponding to the first alignment layer, wherein the first alignment layer and the second alignment layer are both vertical alignment layers, and wherein a portion of the thin film layer is located on a portion of the active region and the thin film layer obstructs light so that the peripheral region and the portion of the active region are kept in a dark state.

Minako discloses (fig. 3) a thin film layer (52b), which is a first alignment film, patterned corresponding to the peripheral region and positioned under the spacer wall, wherein both the sealant and the spacer wall are located on the thin film layer; and a second alignment layer (52a) positioned on the first substrate and opposite to the first alignment and patterned corresponding to the first alignment layer, wherein the first alignment layer and the second alignment layer are both vertical alignment layers, and wherein a portion of the thin film layer is located on a portion of the active region and the thin film layer obstructs light so that the peripheral region and the portion of the active region are kept in a dark state, for the benefit of improving the display quality of the liquid crystal display element by preventing contrast in the vicinity of an injection port from lowering due to a light leakage through the injection port (Abstract). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a thin film layer, which is a first alignment film, patterned corresponding to the peripheral region and positioned under the spacer wall, wherein both the sealant and the spacer wall are located on the thin film layer; and a second alignment layer positioned on the first substrate and opposite to the first alignment and patterned corresponding to the first alignment layer, wherein the first alignment layer

and the second alignment layer are both vertical alignment layers, and wherein a portion of the thin film layer is located on a portion of the active region and the thin film layer obstructs light so that the peripheral region and the portion of the active region are kept in a dark state, for the benefit of improving the display quality of the liquid crystal display element by preventing contrast in the vicinity of an injection port from lowering due to a light leakage through the injection port.

Claims 6 and 10 are met the discussion regarding claim 2 rejection above.

Claim 8 is met the discussion regarding claim 4 rejection above.

Claim 9 is met the discussion regarding claim 5 rejection above.

Claim 16 is met the discussion regarding claim 2 rejection above.

Claim 18 is met the discussion regarding claim 4 rejection above.

Claim 19 is met the discussion regarding claim 5 rejection above.

Claim 27 is met the discussion regarding claim 2 rejection above.

Claim 28 is met the discussion regarding claim 25 rejection above.

Claim 33 is met the discussion regarding claim 2 rejection above.

Claim 3, 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Admission and Minako, and further in view of Jung et al (US 2005/0030468).

Regarding claim 3, Kim et al lacks disclosure of wherein the thin film layer is an anti-reflective layer.

Jung et al discloses a thin film layer patterned corresponding to the peripheral region, which is anti-reflection film (not shown) formed on the peripheral area of the

display panel for the benefit of preventing a reaction between the sealant and the liquid crystal material is formed on the sealant, [par. 0040]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an anti-reflective layer located on the peripheral region where both the sealant and the spacer wall area located for the benefit of preventing a reaction between the sealant (or the spacer wall) and the liquid crystal material is formed on the sealant (or the spacer wall).

Claim 7 is met the discussion regarding claim 3 rejection above.

Claim 17 is met the discussion regarding claim 3 rejection above.

Claims 22, 23, 26, 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Admission, and further in view of Chung et al(US 2004/0012750).

Regarding claims 22 and 23, Kim et al lacks disclosure of the spacer wall and the spacer block comprising inorganic materials or photoresist materials, such as silicon dioxide or silicon nitride.

However, spacer wall and/or spacer block can be made from silicon nitride as a common material used in the art, and for the benefit of being transparent in the visible part of the light spectrum, and being strong to maintain the uniform cell gap, as evidenced by Chung et al, [par. 0019]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the spacer wall and the spacer block comprising silicon nitride for the benefit of being transparent in the visible part of the light spectrum, and being strong to maintain the uniform cell gap.

Claim 26 is met the discussion regarding claim 22 rejection above.

Claim 31 is met the discussion regarding claim 22 rejection above.

Claim 34 is met the discussion regarding claim 23 rejection above.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Admission and Minako, and further in view of Nakahara et al (US 6,989,879).

Even though Kim et al lacks disclosure of a third alignment layer covering the first substrate, and a fourth alignment layer covering the second substrate between the thin film layer and the second substrate, it would have been obvious to one ordinary skill in the art to have alignment films formed on and covered the substrates for aligning the liquid crystal molecules, and therefore it does not patentably distinguish the invention.

Response to Arguments

Applicant's arguments with respect to claims 1-10, 15-19, 22-28 and 31-36 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
Art Unit 2871

TN

ANDREW SCHECHTER
PRIMARY EXAMINER